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FEE TRANSMITTAL for FY 2004 <small>Effective 10/01/2003, Patent fees are subject to annual revision.</small>		Complete if Known	
		Application Number	09/806123-Conf. #7064
		Filing Date	May 18, 2001
		First Named Inventor	Ursula Ziegler
		Examiner Name	M. R. Jackson
<input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27		Art Unit	1773
TOTAL AMOUNT OF PAYMENT (\$) 330.00		Attorney Docket No.	05587-00312-US

METHOD OF PAYMENT (check all that apply)		FEE CALCULATION (continued)	
<input type="checkbox"/> Check <input type="checkbox"/> Credit Card <input type="checkbox"/> Money Order <input type="checkbox"/> Other <input type="checkbox"/> None		3. ADDITIONAL FEES	
<input checked="" type="checkbox"/> Deposit Account: Deposit Account Number: 03-2775 Deposit Account Name: Connolly Bove Lodge & Hutz LLP The Director is authorized to: (check all that apply) <input checked="" type="checkbox"/> Charge fee(s) indicated below <input checked="" type="checkbox"/> Credit any overpayments <input checked="" type="checkbox"/> Charge any additional fee(s) or any underpayment of fee(s) <input type="checkbox"/> Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.			
FEE CALCULATION			
1. BASIC FILING FEE			
Large Entity	Small Entity		
Fee Code (\$)	Fee Code (\$)	Fee Description	Fee Paid
1001 770	2001 385	Utility filing fee	
1002 340	2002 170	Design filing fee	
1003 530	2003 265	Plant filing fee	
1004 770	2004 385	Reissue filing fee	
1005 160	2005 80	Provisional filing fee	
SUBTOTAL (1) (\$) 0.00			
2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE			
Total Claims <input type="text"/> -20** = <input type="text"/> x <input type="text"/> = <input type="text"/>			
Independent Claims <input type="text"/> -3** = <input type="text"/> x <input type="text"/> = <input type="text"/>			
Multiple Dependent <input type="text"/> = <input type="text"/>			
Large Entity	Small Entity		
Fee Code (\$)	Fee Code (\$)	Fee Description	Fee Paid
1202 18	2202 9	Claims in excess of 20	
1201 86	2201 43	Independent claims in excess of 3	
1203 290	2203 145	Multiple dependent claim, if not paid	
1204 86	2204 43	** Reissue independent claims over original patent	
1205 18	2205 9	** Reissue claims in excess of 20 and over original patent	
SUBTOTAL (2) (\$) 0.00			
**or number previously paid, if greater; For Reissues, see above			
		3. ADDITIONAL FEES	
		Large Entity	Small Entity
		Fee Code (\$)	Fee Code (\$)
		Fee Description	Fee Paid
		1051 130	2051 65
		1052 50	2052 25
		1053 130	1053 130
		1812 2,520	1812 2,520
		1804 920*	1804 920*
		1805 1,840*	1805 1,840*
		1251 110	2251 55
		1252 420	2252 210
		1253 950	2253 475
		1254 1,480	2254 740
		1255 2,010	2255 1,005
		1401 330	2401 165
		1402 330	2402 165
		1403 290	2403 145
		1451 1,510	1451 1,510
		1452 110	2452 55
		1453 1,330	2453 665
		1501 1,330	2501 665
		1502 480	2502 240
		1503 640	2503 320
		1460 130	1460 130
		1807 50	1807 50
		1806 180	1806 180
		8021 40	8021 40
		1809 770	2809 385
		1810 770	2810 385
		1801 770	2801 385
		1802 900	1802 900
		Other fee (specify)	
		*Reduced by Basic Filing Fee Paid	
		SUBTOTAL (3) (\$)	330.00

SUBMITTED BY		(Complete if applicable)	
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		Date	March 8, 2004

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Dated: March 8, 2004	Signature: <i>A. L. Hamm</i> (Amy L. Hamm)



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ON THIS 8TH DAY OF MARCH, 2004

BY A. L. Hamn

1998/G 026 (5587*312)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

.....
URSULA ZIEGLER ET AL :

SERIAL NO: 09/806,123 :

ART UNIT: 1773

FILED: MAY 18, 2001 :

EXAMINER: M. R. JACKSON

FOR: COMPOSITE ARTICLE MADE FROM :
POLYACETAL AND FROM :
STYRENE-OLEFIN ELASTOMERS :

.....
Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
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Sir:

APPEAL BRIEF

REAL PARTY IN INTEREST

The real party in interest is Ticona GmbH by virtue of an assignment duly recorded
in the Patent and Trademark Office on May 17, 2001, at Reel 011813 Frame 0105 (3
pages).

RELATED APPEALS AND INTERFERENCES

Appellant is unaware of any other appeals or interferences which will directly affect
or be directly affected by or have a bearing on the Board's decision in the pending appeal.

03/12/2004 AWONDAF1 00000025 032775 09806123

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STATUS OF CLAIMS

Claims 1-12 are pending in this application. Claims 1-12 stand rejected. No claims have been allowed, and the rejected claims constitute the claims on appeal.

STATUS OF AMENDMENTS

No response was filed to the Final Office Action dated October 24, 2003. The amendments submitted prior to the Final Office Action have been entered, and a copy of claims 1-12 is attached as an appendix to the Appeal Brief.

SUMMARY OF THE INVENTION

The invention relates to a composite article made from polyacetal and from styrene-olefin elastomers, and also to a process for producing the same. By modifying the styrene-olefin elastomer with non-olefinic thermoplastic material, an adhesive bond is obtained between polyacetal and styrene-olefin elastomers. (Specification page 1, lines 6-10).

Surprisingly, it has been found that styrene-olefin elastomers which have been modified by adding non-olefinic thermoplastic material enter into an adhesive bonding with polyacetal. In contrast, styrene-olefin elastomers modified with olefinic thermoplastic material show no lasting adhesion to polyacetal. (Specification page 3, line 37 through page 4, line 3).

The invention provides a composite article made from polyacetal and from at least one modified styrene-olefin elastomer, which comprises from 15 to 70% by weight, based on the weight of the modified styrene-olefin elastomer, of non-olefinic thermoplastic material, and also a process for producing the same, where a molding made from

polyacetal is initially formed and onto which is then molded a coating or at least one molding made from the modified styrene-olefin elastomer. An adhesive bond is formed between the polyacetal and the modified styrene-olefin elastomer. (Specification page 4, lines 5-11).

The modified styrene-olefin elastomers used according to the invention are compositions based on thermoplastic styrene-olefin elastomers (TPE-S). These compositions generally comprise from 20 to 85% by weight, preferably from 35 to 70% by weight, of maleic anhydride-functionalized and/or non-functionalized high-molecular-weight tri-block copolymers which have been built up from rigid end-blocks of styrene and from flexible middle blocks of olefin, and from 15 to 70% by weight, preferably from 20 to 50% by weight, of non-olefinic thermoplastic material. Based on the styrene-olefin block copolymer content, the composition comprises, in addition, at least 5 parts by weight respectively and not more than 200 parts by weight respectively by lubricating plasticizer and/or inorganic filler per 100 parts by weight of styrene-olefin block copolymer. (Specification page 6, lines 10-20).

The TPE-S compositions according to the invention have a Shore A hardness in the range from 30 to 90, preferably from 40 to 80. (Specification page 6, lines 35-36).

THE ISSUES

The issues in this appeal include the following:

1. Whether or not claims 1-9 are properly rejected under 35 USC §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which appellant regards as the invention through the recitation in claim 1, line 7, of the limitation “high-molecular weight styrene-olefin block copolymer”;
2. Whether or not claims 1-9 are patentable under 35 USC §103(a) over EP O 837 097; and
3. Whether or not claims 10-12 are patentable under 35 USC §103(a) over DE 44 34 656.

GROUPING OF CLAIMS

For purposes of this appeal each of the rejected claims should be separately considered, and arguments in support of patentability are submitted below.

ARGUMENT

In support of patentability, appellant submits the following with respect to the rejection of claims 1-9 under 35 USC §112. Appellant respectfully disagrees with the objection to the term “high molecular weight” particularly because the specification identifies EP-A-710703 and EP-A-699519 at page 8, lines 22-23, and each of these disclosures has been incorporated by reference. On page 3, lines 49-50 of EP-A-699519, for example, the apparent molecular weight of the total block polymer is defined as being in the range of from 20, 000 to 350,000. Accordingly, it is submitted that the specification

does in fact provide a reasonable standard for ascertaining the meaning of the recited term. Moreover, the term is a common one well known to persons of ordinary skill in the art.

Appellant respectfully submits that claims 1-12 define an invention which is neither disclosed nor suggested by the prior art taken alone or in combination with one another. Specifically, claims 1-9 are not rendered obvious by EP-A-837097 ("EP '097") and claims 10-12 are not rendered obvious by DE-C-4434656 ("DE '656"), for the reasons discussed below.

EP '097 describes specific block copolymers and their use for improving the compatibility of polymer blends and the adhesion of non-polar thermoplastic elastomers (TPE e.g. SEBS) onto polar engineering resins, where a number of materials are mentioned including polyacetals. The block copolymer used as a compatibilizer contains (a) a chemically modified polyolefin, (b) a thermoplastic polyurethane, copolyester or copolyamide, and (c) a coupling agent.

A few examples illustrate the improved adhesion of a thermoplastic elastomer (PP/EP DM DVA) blended with the block copolymer compatibilizer (page 12, table V) onto an engineering resin, e.g. ABS. where sheets of both materials have been pressed together in a hot press (page 9, lines 27-29). Specific examples with polyacetals are not mentioned.

According to the teaching of EP '097 it is necessary to apply the additional block copolymer to achieve the improved compatibility or adhesion. In contrast thereto according

to the present invention such complicated block copolymers are not necessary but merely a compound comprising SEBS and a non-olefinic thermoplastic elastomer. In particular the SEBS-compounds used in the present invention do not comprise a modified polyolefin.

In summary EP '097 differs from the claimed invention herein because a composite article made from polyacetals and from a specific SEBS compound is neither described nor suggested.

DE '656 describes moldings produced by multicomponent injection molding from thermoplastics and a sound-deadening sheath made from thermoplastic elastomers. A wide variety of materials is given both for the thermoplastic elastomers and for the thermoplastics which can be used, and these include styrene-olefin elastomers and POM.

However, in contrast to the invention defined in the present claims, the bond in the DE '656 moldings is produced mechanically by interlocks (see 24 in Figure 1; column 3, lines 61-68). Nowhere is mentioned that the bond between the hard and the soft component is due to the composition of the elastomer A.

The DE '656 publication fails to provide any specific information for using these particular materials together. Also these are not stated advantages of a combination of this type.

In summary, in view of EP '097 and DE '656 no teaching or suggestion can be found which makes the present invention obvious to someone skilled in the art.

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CONCLUSION

In view of the above argument, it is submitted that claims 1-12 are indeed patentable over the prior art, and it is respectfully requested that the rejection of these claims be reversed.

Respectfully submitted,

CONNOLLY BOVE LODGE & HUTZ LLP

By Richard M. Beck

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RMB/alh/309979

Attachment: Appendix

APPENDIX

CLAIMS ON APPEAL

Application Serial No. 09/806,123

Filed: May 18, 2001

Claim 1: A composite article made from polyacetal and from at least one modified styrene-olefin elastomer, formed by a polyacetal molding which has to some extent or completely been coated with the modified styrene-olefin elastomer, or to which one or more moldings made from the modified styrene-olefin elastomer have been directly molded-on, where the modified styrene-olefin elastomer is a composition which comprises from 20 to 85% by weight of functionalized and/or non-functionalized high-molecular-weight styrene-olefin block copolymer, built up from rigid end-blocks of styrene and from flexible middle blocks of olefin, and from 15 to 70% by weight of non-olefinic thermoplastic material, and also at least 5 parts by weight respectively and not more than 200 parts by weight respectively of lubricating plasticizer and/or inorganic filler per 100 parts by weight of styrene-olefin block copolymer, and wherein the modified styrene-olefin has a Shore A hardness of from 30 to 90.

Claim 2: A composite article as claimed in claim 1, wherein the polyacetal and the modified styrene-olefin elastomer have been adhesively bonded to one another.

Claim 3: A composite article as claimed in claim 1, wherein the strength of the bond between the polyacetal and the modified styrene-olefin elastomer is at least 0.5 N/mm².

Claim 4: A composite article as claimed in claim 1, wherein the polyacetal used comprises a polyoxymethylene copolymer.

Claim 5: A composite article as claimed in claim 1, wherein the non-olefinic thermoplastic material has been selected from the class consisting of thermoplastic polyesterurethane elastomers, thermoplastic polyetherurethane elastomers, thermoplastic polyesters, thermoplastic polyesterester elastomers, thermoplastic polyetherester elastomers, thermoplastic polyetheramide elastomers, thermoplastic polyamides, thermoplastic polycarbonates, thermoplastic polyacrylates, acrylate rubbers and styrene-acrylonitrile-acrylate rubbers (ASA).

Claim 6: A composite article as claimed in claim 1, in the form of a molding made from polyacetal, which has been entirely or to some extent coated with the modified styrene-olefin elastomer.

Claim 7: A composite article as claimed in claim 1, in the form of a molding made from polyacetal, to which at least one other molding made from the modified styrene-olefin elastomer has been molded-on.

Claim 8: A composite article as claimed in claim 1, which has been produced by multicomponent injection molding.

Claim 9: A composite article as claimed in claim 8, wherein the molding is firstly molded from polyacetal and then a coating or a molding made from the modified styrene-olefin elastomer is injected onto the polyacetal molding.

Claim 10: A process for producing a composite article made from polyacetal and from at least one modified styrene-olefin elastomer, where the modified styrene-olefin

elastomer comprises from 15 to 70% by weight of non-olefinic thermoplastic material, and where a molding is firstly molded from polyacetal, onto which is then molded a coating or at least one molding made from the modified styrene-olefin elastomer, giving an adhesive bond between the polyacetal and the modified styrene-olefin elastomer.

Claim 11: The process as claimed in claim 10, which is a multicomponent injection-molding process carried out in a mold, where the molding made from polyacetal has been preheated to a temperature in the range from 80°C to just below its melting point prior to molding-on of the modified styrene-olefin elastomer, the melt temperature of the modified styrene-olefin elastomer is from 200 to 270°C during molding onto the molding made from polyacetal, and the temperature control of the mold has been set to a temperature in the range from 20 to 140°C.

Claim 12: The process as claimed in claim 11, wherein the molding made from polyacetal has been preheated to a temperature in the range from 100 to 160°C, the melt temperature of the modified styrene-olefin elastomer is from 220 to 260°C, and the temperature control of the mold has been set to a temperature in the range from 30 to 80°C.